

# Safety Gram



ABN 89 064 651 109

*Safety Gram No. 26-02*

## ESAA 51/2002

### **AIM**

**To increase safety awareness affecting safe working practices and to provide Incident/Accident information sharing between centres.**

### **TIME / DATE / LOCATION**

- 21/10/02
- Warrnambool

### **BRIEF DESCRIPTION OF INCIDENT**

G&B crew were carrying out work on a pole type substation, installing HV ABC Dropper Leads. At completion of works the substation was being re-energised. On closing the centre phase Boric Acid Fuse Unit, the 15E fuse operated. On investigation it was found that the HV lead had blown out through the insulation from the core to the screen wires.

The leads were made up locally from second hand cable (Approximately 20 years old).

The insulation resistance of the leads was tested before they were taken out onto job site with a 5KV tester.

### **CONTRIBUTING FACTORS TO INCIDENT**

The failure was in single core, 35 sq mm Aluminium, 12.7/22 kV xlpe pvc sheathed cable.

Examination of the failed cable sample showed the copper screen wires were black with copper oxide which is characteristic of cable that has been wet for a considerable period.

There is no evidence that the cable was mechanically damaged prior to the fault.

### **LOCAL ACTION TAKEN**

The lead was replaced with another lead from a job lot in depot and supply restored.

### **ADDITIONAL COMMENTS**

The testing method of using a 5 kV insulation resistance tester or DC 'hi-pot' testing may not find this occasional problem. 'Hi-pot' testing may actually cause the cable to fail upon AC energisation.

### **FURTHER ACTION**

Communication to all relevant personnel the risk of reusing this type of cable.

### **POTENTIAL SEVERITY (Fatality, Permanent Injury, Minor Injury)**

Severe

- Please discuss at Work Group Meeting.
- Copy to all notice boards printed on yellow paper.

Contact : Barry Culph	Phone (03) 9683 4586	Date: 25/11/02
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