



**DEPARTMENT OF MINES  
WESTERN AUSTRALIA**

**SIGNIFICANT INCIDENT REPORT NO. 24**

**CRANE DOGMAN SURVIVES 'SHOCK' FROM 22kV  
TRANSFORMER**

**INCIDENT**

During the dismantling of a monorail structure, a 15 metre section of beam supported by a mobile crane contacted the High Voltage terminals of a transformer. At the time of the accident, the dogman was holding down one end of the load to intentionally elevate the opposite end, thereby allowing the load to be slewed over the transformer. The beam contacted the 'live' terminals and the dogman received an electric shock, became unconscious and required resuscitation. Fortunately he recovered.

**CAUSE AND COMMENT**

The accident resulted from a deliberate action which involved manoeuvring the suspended load too close to the 'live' transformer terminals. The accident occurred even though the following measures were in place;

- Walled enclosure of transformer 2.27m high
- Transformer supply cable routed underground
- Specification of safe minimum clearances
- Crane driver and dogman both certificated
- All personnel had been through site safety induction

**PREVENTATIVE ACTION**

The required minimum safe distance for such work in proximity to electrical equipment is 3 metres for voltages up to 132kV and 6 metres for higher voltages. Where such clearances cannot be assured, correct isolation of the electricity supply must be effected.

Effective 'close' supervision is essential for critical tasks undertaken by employees and the employees of contractors. Whenever cranes or similar plant are required to operate in the vicinity of electrical equipment the job requires careful thought and planning before work starts. Persons involved must be made aware of the possibly fatal consequences of contact with electricity, and employees should be counselled on the avoidance of taking risks for convenience to complete tasks.

**"THIS ACCIDENT WAS PREVENTABLE"**

J M Torlach  
STATE MINING ENGINEER

**SECWA**

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**SAFETY AWARENESS SAVES LIVES**