BYPASS OF ANTI CLIMB BARRIER TO OVERHEAD POWER LINE

Incident
A person was fatally injured when he came in contact with live electrical conductors on an overhead power line.

Circumstances
The victim bypassed anti climb barriers fitted to the tower supporting the overhead power lines. The transmission tower was one of 106 towers used to transmit 6.9Kv, 3 phase power supply from one mining site to another, both of which were operated by the same company.

The tower is on a mining lease but unfenced and accessible to the public.

Investigation
An elevated pipeline which was installed near the towers may have provided a pathway to bypass the anti climb barriers. Electrical protection of the power supply was not designed to prevent death from direct contact with energised electrical conductors.

Recommendations
All mines that reticulate electrical power via overhead power lines should immediately review their operation. The review should consider:

• The provision of anti climb barriers in accordance with relevant guidelines and standards.
• The degree of difficulty provided by the anti climb barriers in the prevention of unauthorised access
• The proximity of structures which may reduce the degree of difficulty afforded by the anti climb barriers
• The routine assessment of the integrity of anti climb barriers
• That an employer has a duty under the Occupational Health and Safety Act 2000 to ensure that both employees and other persons at the employer's place of business are not exposed to risks to their health or safety

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At the time of the incident:

- pipeline may have provided an easier path to bypass the anti climb barrier
- anti climb barriers have minimal external extension
- anti climb barriers have no prevention of internal access.

Post incident modifications:

- pipeline removed, concrete foundations remain
- anti climb barriers have external protrusion extended
- anti climb barriers have internal access prevention
- height of anti climb barriers above ground level has been increased.

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