



Mines Safety Bulletin No. 87

Date: 20 July 2009

Subject: Excavating near cables buried in the ground

Background

Three recent incidents involving excavator buckets contacting buried electrical cables at mineral treatment plants raise obvious concern and serve to remind responsible persons of their obligations to safeguard against this hazard. One incident involved a "bobcat" doing regular clean-up, and the others involved larger machines excavating new cable trenches.

Immediate causes or contributory factors

- Risk assessments to identify the hazards and necessary controls had not been conducted.
- An established "excavation permit" system of work was either not in place or not adhered to.
- Plans showing the locations of buried services had not been updated.

Recommendations

Prior to commencing any excavation work deeper than 300 mm, always consider the potential for impacting buried services (risk assessment).

"Excavation permit" procedures must be established and maintained at all mine sites in accordance with Mines Safety and Inspection Regulations 5.13 and 5.31, which require:

- the manager of a mine to ensure that excavation work is not commenced in the vicinity of buried cables unless a permit to do so has been issued by an authorised person;
- authorised persons to specifically identify the location of the excavation work, consult plans showing the location of buried services, and detail on any permit issued to persons carrying out the work any precautionary measures that need to be taken;
- the location and details of all buried high-voltage and low-voltage cables at the mine to be recorded on plans that are kept up-to-date and accessible by all persons who might need to use them; and
- cables buried in the ground to be:
 - installed in accordance with Australian Standard AS/NZS 3000:2007 *Electrical installations*,
 - installed with orange cable marker tape and surface cable route indicators, and
 - mechanically protected by either wire armouring or a substantial heavy duty wiring enclosure.

Most importantly, employers have a duty to ensure all employees involved in excavation work have been properly trained and assessed in the system of work, and records of that training and assessment are maintained.

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