



Successful implementation of fatigue management programme at Navachab mine

Three current major focus areas in the safety arena at AngloGold Ashanti's open-pit operations are OHSAS 18001 implementation (*see case study www.aga-reports.com/06/OHSAS.htm*), managing geotechnical risk and managing fatigue.

Sleep disturbance and sleep deprivation, and the resultant fatigue, are health risks associated with long working hours or shift work and clearly can have negative consequences for occupational safety and productivity. During 2006, a fatigue management programme was implemented at Navachab Mine in Namibia. The mine is situated 10 kilometres south-west of the town of Karibib, 170 kilometres north-west of Windhoek, the capital of Namibia. The introduction of the programme was prompted by an increasing industry-wide focus on the topic and as part of a proactive risk management intervention.

"The major risk we identified was a lack of knowledge of how fatigue can be identified and managed," says Navachab MD Gerry Arnat. "The remote location of the mine, shift schedules and hours of work are all relevant, but the main objective of a fatigue management programme is to create a climate in which employees feel able to advise their supervisors that they are fatigued, without fear of being disciplined. It's also important to equip employees with understanding the causes of fatigue and of how it can be managed."

In May 2006, Australian fatigue management consultant Peter Simpson was commissioned to carry out an assessment at Navachab mine. This took the form of a series of participatory workshops involving mining operators and organised labour. This was followed by the development of a code of practice, a fatigue management training programme and an intensive awareness campaign. Communication channels used in the campaign included face-to-face briefing sessions, posters and booklets.

The code of practice, developed with the involvement of unions, management and operators, specifies responsibilities and includes a comprehensive risk matrix and a procedure to be followed in fatigue identification and management.

Key concepts in the training campaign are the importance of self- and peer-management, and the creation of an environment where fatigue is closely monitored by supervisors. "We also stress the potential of after-hours social activities resulting in fatigue on the following day, and the importance of self-managing this aspect," says Arnat.

A fatigue management tool has also been developed and has become an integral part of the mine's incident investigation procedure. This entails using a fatigue checklist to indicate, among other things, the time of the day which the incident took place, evaluating the person's pre-shift sleep patterns, the recent shift schedule history and the shift break procedure. The checklist gives a good indication as to whether the incident could have been fatigue-related or not.

Navachab mine changed from contract to owner mining in 2004. The change was beneficial to fatigue management, as it involved changing from a two-shift roster of 12 hours each to a three-shift arrangement. Reducing length of shifts reduced the risk of fatigue, but the change also necessitated recruiting a number of new employees, 80% of whom had no experience and required extensive training. This naturally raised the general safety risk.

Rest periods have been introduced for operators, and additional monitoring is applied during the high-risk period between 02:00 and 06:00 in the morning, when research has shown the body's resistance and concentration levels to be at their lowest.

No major changes to the current programme are planned for 2007. "We will review the code of practice to assess its effectiveness," says Arnat "and will continue benchmarking within the international mining industry to establish whether any new developments should be incorporated into our programme."

