



Radiation monitoring

Radon-222 (radon) is one of the decay products of uranium-238 which occurs naturally in many rocks and soils. In terms of occupational exposure, the most significant risk associated with uranium is radon gas.

Radiation protection is regulated by the National Nuclear Regulator (NNR), and dependent on each mine's individual risk profile. Three AngloGold Ashanti mines, Great Noligwa, Kopanang and TauTona, have been identified as special case mines in that exposure could potentially exceed the NNR annual dose limit of 20mSv/a average over five years. Extensive radon monitoring systems have been established at these three mines, where all workers are issued with continuous personal dosimeters (radon gas monitors), which are analysed on a monthly basis and the reports forwarded to the NNR.

Less frequent radon monitoring is conducted at low risk mines, such as Tau Lekoa where representative groups of individuals are monitored on a six-monthly basis.

Mitigation measures include efficient ventilation systems and the prevention of leakages from old workings. In addition, extensive administrative limits have been established internally. To prevent over-exposure to radon gas, employees are moved to lower risk underground areas or to surface should they reach the annual dose limit. No over-exposures have been measured in the last three years.