

# HAZARD ALERT



## MINER DIES WHEN EXPOSED TO BLASTING FUMES



One worker died and another suffered serious lung damage at an underground hardrock mining operation in 1996. The workers loaded a development round with explosives, then blasted from a nearby refuge station. Unknown to the workers, sulfides were present in the rock, and the blast released a deadly amount of sulfur dioxide. Within minutes, fumes began seeping into the refuge station through openings around the door. Both workers decided to try to run through the fumes to a nearby shaft station, in the hope of reaching uncontaminated air. One worker made it as far as the shaft station before he collapsed and died. The other worker turned around and ran back to the refuge station, where he stayed until help arrived. He suffered permanent lung injury.

WHSCC investigating officers determined the primary cause of the accident was **lack of information**. Underground operation supervisors and workers were not adequately informed about the mineral content of the material being blasted; this resulted in unnecessary exposure to deadly levels of sulfur dioxide from the blast.

The secondary cause of the accident was the use of **improper emergency refuging procedures**.

### Recommended Preventive Action

- Establish a communications procedure between engineering/geology and underground workers; information on how to identify geological contacts and rock types **must** be communicated effectively. The *Occupational Health and Safety Act* states: "Every employer shall acquaint an employee with any hazard to be found at the place of employment in connection with the use, handling, storage, disposal and transportation of any tool, equipment, machine, device, or biological, chemical or physical agent." [Section 9(2) (b).]
- All blasting where sulfides may exist is to be done from a central blasting system on the surface of the mine.
- All blasting procedures are to be reviewed and updated, in consultation with the company's joint

health and safety committee. Be specific: describe "who, what, when, where and how" when outlining blasting procedures.

- Train staff on communications, blasting, and refuging procedures; reinforce principles through regular follow-up training. In an emergency, it's often difficult to remember instructions; the more frequently people are trained, the more likely they are to remember what to do in an emergency.

As well, officers point to *Regulation 96-105* Underground Mine Regulations, which states: "An employer shall establish and maintain underground a sufficient number of refuge stations that have posted escape plans and posted emergency procedures." [Section 72(h).]

*Prevention Services, Workplace Health, Safety and Compensation Commission*

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**WHSCC**  
All Accidents are Preventable

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