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Arsenic stockpile alarms city

About 3,800 tonnes under Yellowknife

BY BOB WAGER
Canadian Press

YELLOWKNIFE — Residents here are becoming increasingly concerned about an underground mountain of arsenic beneath their feet, even though they have become accustomed to small amounts of it in the air they breathe.

About 3,800 tonnes of highly toxic arsenic trioxide is stored in unused tunnels in the Giant gold mine just outside this northern city.

Yellowknife residents said several environmental and health officials this week they feared the highly soluble chemical could leak into creeks and Great Slave Lake, ultimately poisoning humans.

"We have thought arsenic stores are supposed to be in the air, not in the ground, that is the issue that needs to be discussed here," Ken Kent told the panel.

The hearing was concerned about the ways to cut the 30 kilograms a day of arsenic dust that puffs out of Giant's smokestack. But even panel members acknowledged that airborne arsenic is not a major health risk in Yellowknife.

Instead, speaker after speaker brought up the huge underground stockpile.

"We want to keep a focus on the arsenic trioxide stored underground because that is a large potential risk," said Elaine Berthelot of the Canadian Public Health Association.

Health Canada says arsenic can cause cancer.

Arsenic dust is one of the byproducts of extracting gold from gold ore. At Giant, minerals are put in barrels and hauled to mined-out horizontal shafts, or stopes, which are sealed with a concrete plug, said Ed Collins, chief environmental engineer with Environment Canada.

Giant is the only operating mine in Canada with such a stockpile. The storage is safe as long as the tunnels remain stable and the mine keeps pumping out and treating water that leaches down its shafts, Mr. Collins said.

"The big problem is if the mine is allowed to flood."

If it did, arsenic would inevitably find its way into Great Slave Lake, Mr. Collins said.

The stopes were developed as storage tunnels without any regulatory oversight or groundwater studies. Some of the storage stopes may already be leaching arsenic into the mine's water treatment system, Mr. Collins said.

The original plan counted on periodic trips to seal the stopes from groundwater. But Mr. Collins said no studies were done to find out if there was groundwater in the area.

Royal Oak Mines, Giant's mineral owner, is currently conducting these studies as a requirement for the renewal of its operating permits.

Giant's water licence expires in 1998. Hearings on its renewal are expected in the fall.