

Nova Scotia's potential uranium industry in the limelight

by Walter G. Speirs

Several large mining companies are actively exploring for uranium deposits in Nova Scotia. In anticipation of the discovery of viable deposits, the Nova Scotia government has set up a public inquiry into the aspects of uranium mining that could affect the province. Many concerns have already been expressed by public groups over the possible health and environmental effects of uranium mining. The following are some public statements made by local groups, and experts as well as some findings from a similar government inquiry that examined uranium mining in British Columbia.

The dangers of disturbing uranium deposits through exploration or mining include possible contamination of the water table and the liberation of toxic radon gas, according to Elizabeth May, of the Halifax Ecology Action Centre.

Any mining in Nova Scotia would probably be open-pit which would expose the uranium to the air. Various radioactive gases are released, the most potent being Radon-222. Radon gas has a half-life of 3.62 days and decays into what are known as "radon daughters". It is thought that these radon daughters if inhaled or ingested are metabolized by the body into potent carcinogens.

Dr. Rosalie Bertell, a cancer researcher and expert on the health effects of uranium recently said in Halifax that "in 1983, eleven hundred American uranium miners will die from lung cancer, caused by the inhalation of uranium particles."

Six public interest groups in Nova Scotia have presented briefs to Halifax MP, the Honourable Gerald Regan expressing their concern about what they termed the unacceptable risks presented by uranium mining and nuclear technology. As well, the Medical Society of Nova Scotia has called for a moratorium on uranium exploration until technology can provide safe methods of disposing or storing the radioactive wastes.

THE BATES COMMISSION

In British Columbia, The Bates Commission is of the opinion that any decision-making regarding a solution to the uranium problem must include risk assessment of both the social and technical problems. "Unlike other technical activities, the nuclear industry including not only uranium mining but also the entire fuel cycle, is seen as presenting special uncertainties and risks, particularly in the control and possible effects of very long-term contaminants."

The commission recommended that extensive clinical and geochemical studies be conducted into the effects of uranium. They also recommended the revision of the method of setting national radiation standards and licensing of mining operations. They stated any such debate must be open to meaningful public scrutiny from both management and labour.

URANIUM AND HEALTH

Greg Kerr, Minister of the Environment commented on the province's environmental protection laws as applied to uranium mining. "Little is known about all the possible dangers of uranium. Therefore the strength of these laws is hard to determine at the present time. The problem is the more that technology advances, the more potential problems are uncovered."

Uranium may be absorbed by inhalation or ingestion in food and is excreted mainly by the kidneys, an organ possibly affected by uranium, explained Dr. Michael Moss of the Victoria General Hospital in Halifax. The rest of the uranium is deposited in the bones (95 percent) and the lungs if inhaled.

Uranium is a heavy metal poison with a dual hazard; it exerts its effects both by chemical toxicity and radiation. The nature of the hazard depends on the type of exposure, the type of uranium and the method of absorption in the body. The effects are of most concern with uranium miners who inhale radioactive dust.

Dr. Moss recently completed a first-time clinical study of 133 persons from 50 families with drilled wells in Harrietsfield, Halifax County. Dr. Moss stated, "It was found that there was no significant difference in kidney function between the normal control group and those who

had consumed drinking water for varying lengths of time with uranium levels far above the current maximum acceptable concentration of twenty parts per billion.

Dr. Moss said the data base was small and further studies possibly in the New Ross area (where high levels were also found) will be conducted by the Provincial Uranium Task Force.

The current recommended but arbitrary limit of 20 ppb (parts per billion) uranium was set in 1978 by a working group of Canadian experts. They considered all the recent scientific data all of which was based on animal studies, and developed a criteria document on uranium toxicity. Moss said, however, that the threshold level at which the chronic effects of uranium start are not known in man.

THE McCLEAVE INQUIRY

Public discussion over the

effects of uranium exploration and mining in Nova Scotia has entered a formal stage through a public inquiry, itself an object of controversy.

The appointment of Judge Robert McCleave to head a public inquiry into "all aspects of exploration, development, mining, processing, storage, waste management and transportation of uranium" involved in uranium mining, has come under cross-fire.

The Concerned Citizens of Cumberland County (CCCC) voiced their opposition to the appointment in that McCleave "does not have the impartiality to oversee the needed educational and searching inquiry. CCCC called for the removal of McCleave and the appointment of three commissioners representing a range of expertise and backgrounds.

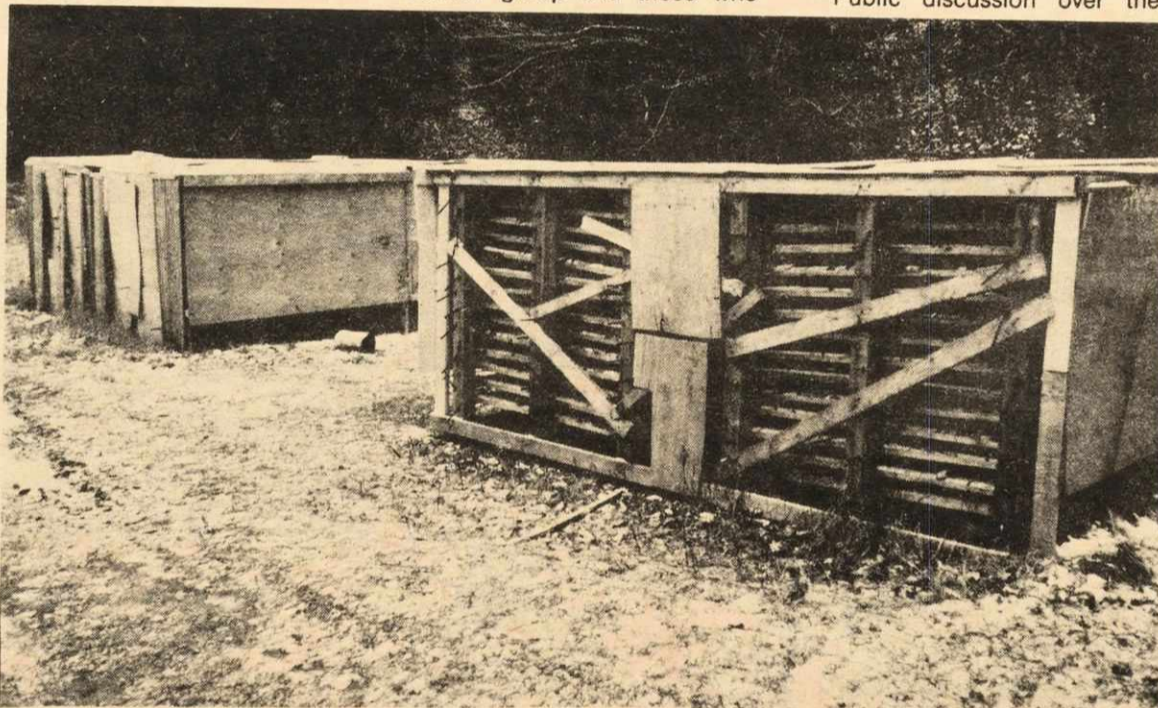
McCleave, however, stresses the openness of his inquiry, "the most open inquiry in Canada and in all the world" and warned against groups trying illegitimately to undermine the inquiry's legitimacy. He called the attacks "unprincipled", often coming in the form of unsigned letters (Chronicle-Herald, February 27).

Susan Holtz, Research and Energy Coordinator of the Halifax Ecology Action Centre, said the recent formation of numerous citizen's groups in the province came as a specific response to the possible dangers posed by uranium mining. "They have a variety of concerns, including community and environmental health, agricultural impact and social and economic concerns," she said.

Delegates from nine Nova Scotia organizations met in Truro last month and called for preliminary public meetings to determine rules of procedure, precise terms of reference and the location of future community hearings for the inquiry.

NDP leader Alexa McDonough expressed her disappointment that "Judge McCleave already has two jobs - as a provincial magistrate and Chairman of the Nova Scotia Labour Relations Board. It is unwise in my opinion to expect one person - even someone free to devote his or her full energies - to such a difficult and complex issue."

The inquiry is now underway, with the first hearings currently taking place in New Ross. McCleave will conduct the inquiry in three stages: soliciting all views and concerns, hearing challenges to those views, and finally discussing his findings with some experts before making his recommendations to the provincial cabinet in the fall of 1982.



This is what really happens when a company decides to see if there is mining.

Gulf irresponsible

A spokesperson for the North Shore Citizen's Against a Radioactive Environment (CARE) has revealed "Gulf Exploration Ltd. is in apparent violation of the provincial uranium guidelines at its waste storage site in Wentworth." It was discovered that the site is totally unmarked and radioactive drill core samples spilled on the ground were easily accessible.

According to Ron Barkhouse, Minister of Mines and Energy, vandals are responsible for tearing down the required warning signs and possibly disturbing the drill samples at the site.

Susan Holtz, said she was "not surprised by these accusations. Flagrant violations by

these mining companies have been commonplace."

Barkhouse conceded that some companies involved in uranium exploration have trespassed on private lands, for example in the New Ross vicinity.

Despite these instances, Barkhouse said "Nova Scotia has the most stringent exploration guidelines in Canada. These guidelines will become law in the near future and the mining companies have complied with them so far."

The fine for a violation to a company that has not carried out the "orderly closure of a mine" under the Mineral Resources Act is only \$1,000. Barkhouse agreed this was a bit

lenient, and said something will be done about it.

Although it is hard to predict at this time, Barkhouse said the importance of the uranium industry to Nova Scotia could be realized through employment in the mines and spin-off industries.

A moratorium on the issuance of further exploration permits, imposed under public pressure during last year's election campaign, has had little effect on the interests of the mining companies, Barkhouse said. "Most (companies) are just on standby," and no applications for open mining operations have been received, he said.