

Canada's Chalk River nuclear crisis: “market planning” produces a fiasco

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22 February 2008

First published in French February 15.

Stephen Harper's minority Conservative government last month fired Linda Keen, the president of the Canadian Nuclear Safety Commission (CNSC), the federal regulatory agency responsible for overseeing the country's nuclear industry. In firing Keen, the Canadian government is pressing forward with a reckless policy of indifference to nuclear safety, having already courted a nuclear and medical disaster which could have a major impact across North America and around the world.

Keen was fired because she refused to submit to pressure from the Conservative minister of Natural Resources, Gary Lunn, who demanded the immediate re-opening of the Atomic Energy of Canada Ltd. (AECL) nuclear research station in Chalk River, a small town in north-east Ontario. This antiquated station, opened more than fifty years ago, was shut down by the CNSC last November 18th, after a routine inspection established that a necessary security modification, ordered 17 months before, had never been completed.

The CNSC stipulated that Crown-owned AECL could reopen its Chalk River nuclear facility only after adding an automatic emergency power system to its reactor cooling system. This was so as to ensure that the Chalk River reactor would remain at a stable temperature in event of a power failure.

The closure of the Chalk River nuclear research centre caused a furor in Canada and internationally, because it threatened to drastically curtail the production of radioactive isotopes used in medical examinations in North America and around the world. In spite of its age, the Chalk River facility supplies more than 50 percent of the global market for medical isotopes.

Isotopes from Chalk River are used in more than 75,000 medical exams daily across the world. As these isotopes decay rapidly, it is impossible to store them for very long. Molybdenum-99, the most commonly used of these medical isotopes, can be stored for no more than ten days.

With Keen and her commission refusing to buckle in the

face of government pressure to allow the Chalk River facility to reopen without the long-ordered safety changes, Conservative Prime Minister Stephen Harper publicly proclaimed at the beginning of December that there was no safety risk, demagogically denounced the CNSC for placing Canadians “health at risk” by endangering the supply of medical isotopes, and announced that his government would take emergency agency to force the facility's reopening over the objections of the country's nuclear regulatory commission. Adding insult to injury, Harper implied that the CNSC's shutdown order was a politically-motivated action designed to tarnish the Conservatives, since Keen, a longtime civil servant, had been appointed by the previous Liberal government.

With the assent of all three opposition parties, the Conservatives then rushed an emergency law through parliament to force the reactivation of Chalk River's nuclear reactor. The legislation was adopted using a special parliamentary procedure, not used since World War II, in which testimony about the Chalk River crisis was taken in front of a fully assembled House of Commons.

Keen declared that operation of the Chalk River nuclear facility without the necessary security system was 1,000 times more dangerous than the safety standard that the commission normally enforces. AECL countered that there was no danger.

To be completely secure, nuclear reactors must be operated with the utmost caution. The abundance of dangers and risks to human life and the environment posed by the generation of nuclear energy leave no room for negligence or improvisation in their operation.

But the government, with the consent of all the opposition parties, ignored all this. Unquestionably, the threat of a shortage of medical isotopes was real, but this was not the fault of the CNSC. Moreover, there is much to show that the government's actions were largely due to concerns that other countries might come forward to challenge Canada's domination of the medical isotope industry, in the event of a shortage, and that the closure of the Chalk River facility was

damaging the international reputation of AECL and Canada's nuclear power industry.

With the removal of Keen, the Conservative government signaled that nothing, not even the systems of regulation and inspection of an activity as dangerous as nuclear power generation, can stand in the way of the dictates of profit. If the person responsible for public protection in the nuclear power industry can be denounced and fired because she resists pressure from the government and media in defence of corporate interests, how can any functionary be expected to enforce a regulation that cuts across the wishes of big business?

In blaming Keen and the CNSC for the closure of the Chalk River plant, the Conservative government continued unflinchingly down the path that led to the nuclear/medical-isotope fiasco in the first place.

The Conservatives sought to cover up the fact that those responsible for the crisis over the Chalk River facility were the federal government itself, Crown-owned ACEL, and MDS Nordion, a company born from the privatization of some of AECL's operations and tasked with distributing isotopes.

For nearly twenty years there had been warnings of a possible shortage of medical isotopes provoked by the closure of the Chalk River facility. Plans had been drawn up for new replacement reactors to be operational by the end of the 1990s. But due to federal government under-funding and unexpected technological glitches attributed to MDS Nordion, AECL's opening of new reactors has been delayed by at least ten years.

In spite of the crucial importance of Chalk River's medical isotope production, the federal Liberal governments of Jean Chrétien and Paul Martin (1993-2006) and the present Conservative government refused to advance the funding necessary for the renovation of the old facility or for the configuration of other reactors to replace Chalk River.

In 2007, Sheila Fraser, Canada's Auditor-General, made public AECL documents that estimated \$600 million would need to be spent over the next five years to refurbish Canada's reactors. Since 2002, the federal government has only assigned \$34 million toward this end.

Although all uranium nuclear power plants produce radioactive isotopes as a product of fission, only a handful of the world's reactors are configured to permit their extraction. Nevertheless, modern medicine's growing need for isotopes did not cause the Canadian government or MDS Nordion to develop alternate isotope supply sources.

Dr. Karen Gulenchyn, the chief of the department of nuclear medicine at Hamilton Health Sciences, told the *Globe and Mail*, "I'm very concerned that there doesn't seem to have been any planning with respect to the ongoing

supply of medical isotopes."

In fact, as the *Canadian Medical Association Journal* (CMAJ), the most important medical journal in Canada, explained in its February 2008 issue, MDS Nordion has refused to collaborate with the three other isotope producers in the world. "They see themselves as the 'big dog'. They're not going to share information with the small ones nipping at its heels," wrote Alan J. Kuperman, a professor of public affairs at the University of Texas. MDS Nordion and AECL adopted an attitude "...that was misleading and, one could argue, socially irresponsible."

It is estimated that the global market in medical isotopes is worth \$3.7 billion dollars, of which a large part goes to MDS Nordion.

The Chalk River fiasco potentially foreshadows future shortages of the international supply of medical isotopes, since three of the four specially configured nuclear reactors that produce them worldwide are more than forty years old.

The Harper government's actions in the Chalk River affair must also be seen within the context of Ottawa's plans to promote nuclear energy.

Nuclear power generation, after having endured a slowdown in its development over the last quarter-century due to the Three Mile Island and Cherbonyl disasters, is more and more being considered by governments and business as an attractive alternative to coal- and petrol-based power plants. The United States is considering twenty-seven nuclear construction projects, and globally there are over a hundred prospective power plants in various stages of development. In Canada itself, Ontario is considering the construction of several nuclear power plants and its adoption of AECL's CANDU reactor would generate the company billions of dollars in business. Also there are a number of obsolete nuclear power facilities that must be replaced. Ottawa's interest in nuclear power goes beyond power-plant construction, as Canada is one of the world's principal producers of uranium.

Nuclear reactors in Canada are currently public property, but the Conservative government of Stephen Harper is considering the privatization of AECL. Already, in 1991, the distribution of medical isotopes was ceded to private interests, in the form of MDS Nordion.



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