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Editorial

Atomic Energy is not “giving away” the Slowpoke

Commentary

By Dr. Heiki Tamm

Dear Sir:

Comments in your paper attributed to critics of the Slowpoke Energy System (SES) show that they do not understand the technology. For example, the comments attributed to Dr. Krell in your article of Sept. 26 are technically wrong and, as a result, give a misleading understanding of the SES being considered for the *Centre hospitalier universitaire de Sherbrooke* (CHUS).

In particular:

l. It is incorrect to say that, if boiling occurred in the pool, radioactivity would be released, requiring evacuation of the hospital, As long as the fuel is in the water (boiling or not) there is no reason to expect radioactive release since the water provides cooling to the fuel.

2. The estimate of two hours until boiling occurs is wrong. There are heat losses through the walls and cover of the pool to remove the residual heat. (All of us trying to minimize our winter heating bills are aware of this form of heat loss.) However, if someone assumes that somehow those losses stop, boiling could start in four to eight days. There would still be no reason to expect releases of radioactivity, just small amounts of steam.

If boiling continued for four months, the water level in the pool would be lowered by 2.5 metres, far short of the 9.5 metres to uncover the top of the fuel. This assumes that no action as simple as turning on a hose is taken within those four months to make up the water being lost. Thus, talk of hazardous releases and evacuations in this situation is without any factual foundation.

3. There is no scientific or factual basis for the suggestion that there is a “1 per cent leakage” from used fuel. Large open pools at power reactor sites around the world have stored used fuel for decades, and these storage areas are routinely accessible with no special precautions needed. To say that this storage somehow presents a hazard outside the building is totally incorrect.

4. It is not correct to say that AECL is “giving away” the Slowpoke Energy System (SES) to the CHUS. AECL would own the system and would charge the CHUS for the heat generated by the SES, whether that heat was generated in the production of isotopes or whether it was produced to heat buildings. AECL would act like any utility owning an energy source and distribution system, charging the user for what is consumed.

On other issues, there appear to be misunderstandings.

Dr. Krell dismisses the use of the SES because it will not provide enough energy for the peak demands. Beyond a certain size in any large heating system – and this depends on size and use – it is more effective to have two smaller units than one large one. At the CHUS, the SES would provide most of the heat needed. For a few days in the year, natural gas would be used to supplement the heat provided by the SES. However, whether there is one system or two is not the important issue. What is important is the cost of heating the buildings. The SES-natural gas combination provides heat to the CHUS more economically than any other alternative.

For isotope production, the same line of reasoning applies. It is not merely a question of whether alternate supplies of isotopes exist. More important are the costs, the flexibility of supply, and the fit with overall needs, both current and long-term. Examined in this context, the SES again best meets the needs of the CHUS.

Another statement by Dr. Krell is reported as "I still would be against it (the SES) on moral grounds." We have equally valid moral grounds for supporting the SES. The use of nuclear energy does not add to the load of combustion product released to the atmosphere the serious consequences of which are raising worldwide concerns about our environment.

In one comment, however, Dr. Krell is right. If the project gets the green light, it will be safe. Based on the excellent record of the Canadian CANDU reactors (seven of the world's top ten reactors for lifetime performance are CANDUs) and their widely acknowledged safety, there is every reason to expect that the SES will perform equally well.

Sincerely,
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