

Environmental groups concerned about demolition plan for Saskatoon's SLOWPOKE-2 nuclear reactor

Groups worried about transportation of nuclear waste, pouring treated water into sewer

[David Shield](#) · CBC News · Posted: Aug 30, 2019 5:00 AM CT | Last Updated: August 30, 2019



The Saskatchewan Research Council's SLOWPOKE-2 reactor is expected to be completely shut down and removed by 2020. (Saskatchewan Research Council/Submitted)

Environmental groups from across the country are expressing concerns about the decommissioning of a small nuclear reactor near the University of Saskatchewan campus.

The Saskatchewan Research Council is applying to dismantle its SLOWPOKE-2 reactor. The demolition would likely happen next year, but before that happens the Canadian Nuclear Safety Commission (CNSC) will hold a hearing in Ottawa next month to look at approving the plan.

Environmental groups' concerns about the plan include the intentions to release treated water from the reactor pool into the City of Saskatoon's sewer system and to send the non-radioactive building materials to a private landfill.

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"We don't know what the cumulative effect or the additive effect of the radioactive burden is going to be of either of those practices," said Brennain Lloyd, project manager of Northwatch, an environmental group in northern Ontario.

Other concerns include the fate of the reactor pool itself. The proposed plan includes filling the empty pool with concrete, rather than removing the contaminated site completely, as long as the site meets radioactivity guidelines.

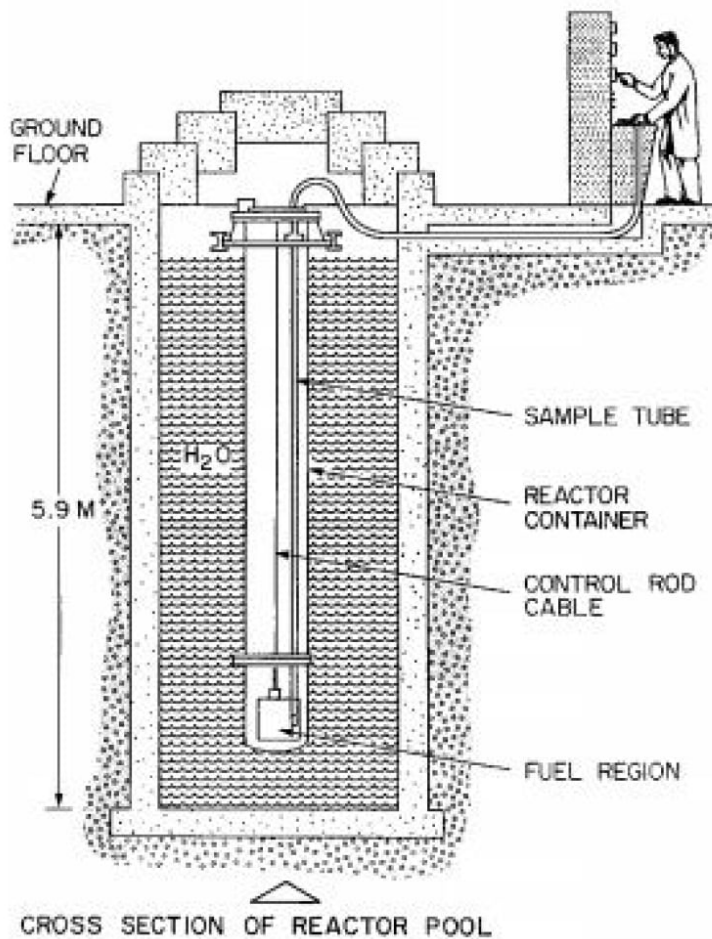
Michael Poellet of Saskatchewan's Inter-Church Uranium Committee Educational Co-operative (ICUCEC) questioned leaving the pool site in the ground.

"The issue there is that the cement in the pool has absorbed radioactivity," said Poellet. "It's not assured that the cement will be able to keep that radioactivity within that cement."

Northwatch, along with the ICUCEC and Nuclear Waste Watch, have all applied to provide comment at the hearing.

The groups said they have important questions, including concerns about eight cubic meters of nuclear waste being transported hundreds of kilometres to a holding facility in South Carolina and parts of the reactor being sent to long-term storage in Chalk River Laboratories in Ontario.

"It's a big deal project," said Lloyd. "It seems to have been flying under the radar but it needs to come out out front."



A diagram of the SLOWPOKE-2 reactor pool that is proposed to be filled with concrete. (Canadian Nuclear Safety Commission)

SLOWPOKE

The SLOWPOKE-2 (Safe LOW Power Kritical Experiment) has been quietly chugging away at the Saskatchewan Research Council since 1981.

Only a handful of the tiny reactors were built across the country. Three of them — at the University of Toronto, Dalhousie University and University of Alberta — have already been shut down and disassembled.

The research council said the reactor, which is roughly the size of a shoebox, was "ultra-safe" and designed to immediately shut down if it ever heated up.

The reactor was mainly used by mining companies to test drilling cores for how much uranium they contained. The decision to shut down the reactor was made in 2017 due to other lab equipment being able to perform the same tests.



The SLOWPOKE-2 reactor has been running at the Saskatchewan Research Council since 1981. (Saskatchewan Research Council/Submitted)

While the SLOWPOKE-2 is a small facility, the decommissioning of any nuclear reactor is strictly regulated and monitored by the CNSC.

The research council has hired Candu Energy Inc., the Canadian company involved in building the reactor, to decommission the site at an estimated cost of \$6.5 million.

How safe?

Russ Munro, Saskatoon's director of water and waste, said the city doesn't have any concerns about the treated water from the reactor pool being released into the sewer system.

"Before any water is released from SRC, it has to have a special discharge permit from the City and pass tests to demonstrate the water has been treated," Munro said in an email.

"Once this process is complete and satisfactory, the treated water will go into the city sanitary sewer where it will mix with other sewage to then be treated as usual in the wastewater treatment plant."

While the Canadian Nuclear Safety Commission wouldn't comment directly on the group's concerns, the decommissioning plan goes into great detail about safety plans.

Any workers dealing with removing the reactor will need to have to use special suits and will not be exposed to radiation doses that go over regulatory limits.

Any radioactive substances will be moved in special transport containers to avoid any contamination.

Sophisticated air filters will also be set up to make sure any hazardous materials released into the reactor room will be captured.

Regardless, environmental groups say they have unanswered questions.

"We really need to be paying attention to projects like these which have the potential to leave a lasting radioactive burden that might even be invisible and unknown to people," said Lloyd.

The Saskatchewan Research Council deferred any comment about the process to the Canadian Nuclear Safety Commission.

Public hearing

Kerrie Blaise, a lawyer with the Canadian Environmental Law Association, said it's very important that there be a public hearing on the plan.

When the association heard the nuclear safety commission was initially going to give groups only 13 days to file materials and to hold the hearing in writing only, Blaise protested.

"There was a lot to review and to go through — transcript documents, applications, records, the decision from the commission — and then also draft a response," she said. "You can't do that in 13 days."

The commission reconsidered its position and gave groups 30 days to make submissions, even though they had asked for 60 days.

Blaise said the hearing could act as important precedent moving forward. Manitoba's Whiteshell Reactor is expected to be decommissioned in the next few years, as is the Pickering Nuclear Generating Station in Ontario.

The CNSC said it will make its decisions on SLOWPOKE-2 after hearing from the public, the Sask. Research Council and its own staff. A report is expected to be issued six weeks after the hearing concludes.

The hearing will be held at the commission's office on September 26. An audio feed will be made available by the CNSC.

ABOUT THE AUTHOR

David Shield is a web writer for CBC Saskatoon.

<https://www.cbc.ca/news/canada/saskatoon/saskatoon-nuclear-reactor-demolition-concerns-1.5264231>