
“Remove radioactive heavy water from Point Lepreau reactor”: Groups

Two public interest organizations -- the Atlantic Chapter of the Sierra Club and the Canadian Coalition for Nuclear Responsibility -- are calling on responsible authorities to have all the radioactively contaminated heavy water drained from the core of the Point Lepreau reactor and replaced with uncontaminated non-radioactive heavy water. Unless this is done, radiation exposures to Lepreau workers and radioactive emissions into the environment will be unnecessarily elevated for the remaining lifetime of the reactor.

Letters were sent Monday morning to the CEO of NB Power, Premier David Alward, and the President of the Canadian Nuclear Safety Commission, asking each of them to take immediate action to ensure that the radioactive heavy water is removed before any consideration is given to refuelling the reactor. No replies have been received so far.

Nobody knew that NB Power was using radioactively contaminated heavy water until an accidental spill of a few litres happened in December, creating an onsite radioactive emergency despite the fact that the plant has been shut down for years. It even came as a surprise to the Canadian Nuclear Safety Commission (CNSC) that NB Power was refilling the reactor core with old, contaminated heavy water instead of using non-radioactive material. The CNSC President, Dr. Binder, called the situation “unsettling”.

Sierra Club Atlantic Director Gretchen Fitzgerald said: “Due to the radioactive contamination in the heavy water, much of which had become airborne, workers had to be evacuated – but two men were trapped inside for two hours because safety doors malfunctioned. And we have since learned that this radioactive spill was a repeat of a similar accident that happened 15 years ago, yet nothing has been done in all the intervening years to prevent a recurrence.”

CCNR President Dr. Gordon Edwards said: “An estimated 1300 billion becquerels of tritium was released to the environment as radioactive water vapour from this one spill. That’s enough tritium in principle to ruin 186 million litres of drinking water, making it unfit for human consumption, according to Canada’s current drinking water standards. And in 2010 the Ontario Drinking Water Advisory Council said that to prevent cancers in humans, the standard for tritium in drinking water should be 350 times more stringent.”

Tritium contamination of heavy water in a CANDU reactor is the main source of internal radiation exposures to atomic workers in the plant, through inhalation, ingestion and absorption through the skin. It is also the principal source of radioactive emissions to the environment, since tritium cannot be filtered from gaseous and liquid effluents.

According to the Health Physics Society, which represents radiation safety professionals, “The purpose of the Tritium Removal Facility (TRF), located at the Darlington Nuclear Generating Station, is to reduce the tritium concentration in the heavy water moderator. A low concentration of tritium is desirable, as it would significantly reduce the tritium occupational exposures and any environmental emissions during the life of the station.”

“CNSC tells us it will never compromise on safety. If this is true, we expect that Point Lepreau will get no operating licence until this situation is corrected,” said Dr. Edwards.

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